



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,404	04/15/2004	Rainer Knapp	KNAPP3	7685
1444	7590	03/02/2005	EXAMINER	
BROWDY AND NEIMARK, P.L.L.C. 624 NINTH STREET, NW SUITE 300 WASHINGTON, DC 20001-5303			BURCH, MELODY M	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/824,404	KNAPP ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Melody M. Burch	3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 15 April 2004.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-11 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 15 April 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4/15/04, 12/29/04</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Objections***

2. Claims 3 and 4 are objected to because of the following informalities: the phrase "the at least one spring element comprises an assembly of saucer springs" in lines 1-2 of claim 3 should be changed to --the at least one saucer spring comprises an assembly of saucer springs--. Appropriate correction is required. Claim 4 is objected to due to its dependency from claim 3.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claims 10 and 11. The phrase "the closed second end" in lines 2-3 of claim 10 and in line 3 of claim 11 lacks proper antecedent basis.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5211379 to Porter in view of US Patent 4328960 to Handke et al.

Re: claims 1, 7, and 9. Porter shows in figure 3 an adjustable length spring, comprising a casing 12 which has a central longitudinal axis and is filled with a pressure fluid; a guide and seal unit 26,33 which closes the casing at a first end or part of the casing between element 26 and 72 thereof; a piston rod 16 which has an outer end shown in the area of element number 46 and is extended through, and sealed towards the guide and seal unit out of the first end of the casing; a piston 30 which is guided in, and sealed towards the casing and connected with the piston rod; a first sectional casing chamber 36,38 which is formed between the piston and the guide and seal unit a second sectional casing chamber 40 which is defined by the piston and faces away from the first sectional casing chamber, a valve 42,54 which is disposed in a vicinity of the piston for interconnection of the sectional casing chambers, the valve having a valve pin 42, which is displaceable along the central longitudinal axis, for actuation of the valve from outside the casing as shown; and at least one spring element 74, which is disposed between the piston and the first end of the casing, which encircles the piston rod as shown, which supports itself on a side opposite the guide and seal unit, and which springily counteracts any extension of the piston rod for at least part of a length of extension.

Porter fails to disclose the limitation of the spring being a gas spring. Handke et al. teach in col. 7 lines 3-5 the limitation of replacing hydraulic damping with pneumatic damping.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the spring of Porter to have been a gas spring, in view of the teachings of Handke et al., in order to provide an equally effective means of providing damping.

Re: claim 8. Porter, as modified, teaches in Porter the limitation wherein displaceability of the guide and seal unit counter to the direction of extension is defined by a stop 34.

Re: claims 9 and 10. Porter, as modified, teach in figure 3 of Porter along with the teachings of Handke et al., the use of an energy accumulator or gas-filled chamber provided between the (left portions of) the sectional casing chamber and the closed second end 14,22 opposite the first end of the casing.

7. Claims 1, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5211379 to Porter in view of US Patent 5579874 to Jeffries et al.

Re: claim 1. Porter shows in figure 3 an adjustable length spring, comprising a casing 12 which has a central longitudinal axis and is filled with a pressure fluid; a guide unit 72 which closes the casing at a first end thereof; a piston rod 16 which has an outer end shown in the area of element number 46 and is extended through, and sealed towards the guide unit out of the first end of the casing; a piston 30 which is guided in, and sealed towards the casing and connected with the piston rod; a first

sectional casing chamber shown above piston 30 which is formed between the piston and the guide unit a second sectional casing chamber 40 which is defined by the piston and faces away from the first sectional casing chamber, a valve 42,54 which is disposed in a vicinity of the piston for interconnection of the sectional casing chambers, the valve having a valve pin 42, which is displaceable along the central longitudinal axis, for actuation of the valve from outside the casing as shown; and at least one spring element 74, which is disposed between the piston and the first end of the casing, which encircles the piston rod as shown, which supports itself on a side opposite the guide unit, and which springily counteracts any extension of the piston rod for at least part of a length of extension.

Porter fails to disclose the limitation of the spring being a gas spring. Jeffries et al. teach in the figure on the front of the patent a spring being in the form of gas with chambers 134 and 136 being filled with gas.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the spring of Porter to have been a gas spring, in view of the teachings of Jeffries et al., in order to provide an equally effective means of providing damping.

Porter fails to show or suggest the limitation of the guide unit being a guide and seal unit. Jeffries et al. teach in the figure on the front of the patent the use of a guide unit 354 including a seal 348.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the guide unit of Porter to have included a seal, as

taught by Jeffries et al., in order to provide a means of preventing debris from the outside of the spring to enter into the interior portions of the spring.

Re: claims 5 and 6. Porter, as modified, teaches in figure 3 of Porter the limitation wherein the at least one spring element, upon extension of the piston rod, is supported towards the guide and seal unit in the direction of extension.

8. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5211379 to Porter in view of US Patent 4328960 to Handke et al. as applied to claim 1 above, and further in view of US Patent 5485987 to Jobelius.

Re: claims 2 and 3. Porter, as modified, describes the invention substantially as set forth above, but does not include the limitation of the at least one spring element comprising at least one saucer spring or an assembly of saucer springs.

Jobelius et al. teach in figure 3 the use of a gas spring containing a plurality of saucer springs 18 surrounding a piston rod.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the at least one spring element to have included at least one saucer spring or a plurality of saucer springs, as taught by Jobelius et al., in order to provide an equally effective means of providing a biasing force countering a length of extension.

Re: claim 4. Porter, as modified, teaches in figure 3 of Porter the limitation wherein the at least one spring element is confined by an encapsulation 70,72.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents: 5429217 to Stringer et al. and 4245826 to Wirges show the use of gas springs with similar internal structures.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*mmb*  
mmb  
February 24, 2005

*Melody M. Burch*  
2/24/05